

**REMARKS**

With entry of this amendment, Claims 1 through 70 are pending in this application.

Minor corrections have been made in the specification. The claims have been amended by canceling claims 1 to 7, 14, and 23, rewriting claims 8, 13, 15, 21 through 57, and 61, and submitting new claims 62 to 70.

No new matter has been added by this amendment.

Applicant hereby requests further examination and reconsideration of the application, in view of the amendments. Applicant also requests reconsideration of the restriction requirement.

**Regarding the examiner's points 1 and 2**

The examiner stated that Applicant's election with traverse of claims 1-32 and 61 in Paper No. 5 is acknowledged and that this application contains claims 33-60 drawn to an invention non-elected with traverse in Paper No. 4.

However, the applicant provisionally elected Group I, claims 1-32, **58-60** and newly added claim 61 in response to the examiner's restriction requirement. Thus, claims 58 to 60 should not be withdrawn from consideration. The acknowledgment of the election with traverse and the examination of claims 58 to 60 are respectfully requested.

**Regarding the examiner's point 5**

Claims 1 to 32 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 has been amended to more clearly define the present invention. Claim 8 has been amended to be organized in such a manner to present a completely operative process. The amended claim 8 is not replete with indefinite and intended results language.

Withdrawal of the rejection is respectfully requested.

**Regarding the examiner's points 6 to 13**

Claim 24 ("the air" at line 2), claim 28 ("the ventilation system" at line 2), claim 29 ("the respiratory track" at line 2), and claim 32 ("the rate" at line 2, and "the inhaled breathable composition" at line 3) stand rejected under 35 U.S.C. §112, second paragraph because there is insufficient antecedent basis for the above limitations.

Claims 24, 28, 29, and 32 have been amended to correct insufficient antecedent basis.

With respect to claims 28 and 29, the examiner further argued that the limitation is indefinite. Claims 28 and 29 have further amended to correct indefiniteness.

Withdrawal of the rejection is respectfully requested.

**Regarding the examiner's point 16**

Claims 1-3, 6-10, 13, 17, 19, 21, 23, 24 and 61 stand rejected under 35 U.S.C. §102(b) as being anticipated by Delauze et al. (WO96/06771).

With respect to claim 8, the examiner asserted that Delauze '771 discloses a first fuel gas

(hydrogen) that will result in an increase of such gas in a user's tissue providing oxygen supplemented with a first fuel gas, and that this co-commitment delivery of oxygen, a commonly known fuel gas, which would also result in raising oxygen levels in tissue above "background" thus meeting the limitations of claim 6, and therefore inherently reduces the reactive oxygen species in the tissue.

Claim 8 has been amended by this amendment. In claim 8 as amended, the step of providing "an animal on land while surrounded by a gaseous environment" is not disclosed in Delauze '771 et al. Delauze '771 teaches the step of providing hydroliox containing at least helium, oxygen and hydrogen. This mixture is not supplied until the diver is lowered at a certain depth of water. Instead of hydroliox, the first breathing mixture which does not contain hydrogen is supplied until the desired pressure and depth are attained. (See col. 2, lines 48 to 67, and col. 3, lines 41 to 65). Delauze '771 explicitly states that "the hydrogenated gas hydroliox is used solely for the duration of the invention proper." (See col. 3, lines 55-56). Therefore, the step of providing "an animal on land while surrounded by a gaseous environment" is not explicitly disclosed in Delauze '771. Also, there is no modification or incentive to use the hydroliox mixture in any environment except for underwater.

Withdrawal of the rejection is respectfully requested.

With respect to claims 9, 10, 13, 17, 19, 21, 23, 24 and 61, reconsideration of the rejection of these claims is also respectfully requested because the applicant has presented above reasons why independent claim 8 is patentable and claims 9, 10, 13, 19, 21, 23, 24 and 61 are dependent

effectively upon claim 8.

Furthermore, with respect to claim 17, the examiner argued that Delauze '771 discloses that the pressure of the gas is provided at or near atmospheric pressure.

The examiner does not indicate where Delauze '771 discloses it. In fact, there is no such disclosure in Delauze '771. Delauze '771 discloses only a hyperbaric condition. (page 7, line 16)

With respect to claim 21, the examiner argued that the chamber in Delauze '771 has an open bottom.

However, the diving turret 5 comprises a lower door 9 is different from the chamber having an open bottom in the present invention. In Delauze '771, the lower door allows the diver who is the person having to affect the intervention once brought to the desired diving pressure P2, to leave the turret. The turret does not have an open bottom while the diver is breathing in the turret. Moreover, unlike the present invention, this turret is not positioned in another chamber. Thus, the step of "positioning the animal in the first chamber with the open bottom so that the animal breathes the breathable composition" in claim 21 is not disclosed in Delauze '771.

Therefore, the examiner's assertion is not proper. Withdrawal of the anticipation rejection is respectfully requested.

#### **Regarding the examiner's point 18**

Claims 18, 20, 25, and 27-32 stand rejected under 35 U.S.C. §103(a) as being unpatentable

over Delauze.

1. Delauze '771 is nonanalogous art.

The Delauze cannot be considered in determining obviousness issue because Delauze '771 is not analogous art.

The court held that two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. . . . A reference is reasonably pertinent if . . . it is one which, because of the matter with which it deals, logically would have commended itself to the inventor's attention in considering his problem. . . . If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, . . . [i]f it is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it. In In re Clay, 23 USPQ 2d 1058, 1060–61 (Fed. Cir. 1992).

Patent Office classification of references and the cross-references in the official search notes are some evidence of “nonanalogy” or “analogy” respectively. In re Ellis, 476 F.2d 1370, 1372, 177 USPQ 526, 527 (CCPA 1973).

First, here, Delauze '771 is not from the same field of endeavor.

Here, the examiner classified claims 1-32, 52 and 58-60 in class 514, subclass 789 in the Office action (Paper No. 4), while the Delauze invention is classified in class 128, subclass 201.7

(and its field of search is class 128, subclasses 200.24, 201.21, 201.27, 201.28, and 204.26). Class 514 relates to drug, bio-effecting and body treating compositions. (It should be noted that the examiner does intentionally avoid classifying claims 1-32, 52 and 58-60 in class 128 for the restriction purpose, while classifying claims 33-37, 43-51, 53, 54-57 in class 128. Therefore, the examiner admits that claims 1-32 and 58-61 relates to drug, bio-effecting and body treating compositions. That is, as the examiner asserted in the restriction requirement, the pertinent art of the present invention is the art *for protection from reactive oxygen species*. Even without the examiner's classification, the present invention is not from the Delauze's field of endeavor. As stated in the specification, the prior art uses the ingestion of scavenging compounds for providing protection from reactive oxygen species (page 2, lines 8-13). This fact shows that the method for protection from reactive oxygen species is not inherently within the respiratory art. It is clear that the Delauze invention is not from the same field of endeavor. Alternatively or in addition, the Delauze '771 is in the field of the water diving rather than a respiratory art. (See page 1, lines 7-9 in Delauze et al: The technical sector of the invention is the domain of industrial underwater diving for operations at medium and great depth.)

While Patent Office classification of references and the cross-references in the official search notes are some evidence of "nonanalogy" or "analogy" respectively, the court has found "the similarities and differences in structure and function of the inventions to carry far greater weight." In re Ellis, 476 F.2d 1370, 1372, 177 USPQ 526, 527 (CCPA 1973) (The structural similarities and functional overlap between the structural gratings shown by one reference and the shoe scrapers of the type shown by another reference were readily apparent, and therefore the arts to which the

reference patents belonged were reasonably pertinent to the art with which appellant's invention dealt (pedestrian floor gratings).). That is, in In re Ellis, the Court held that even if there is evidence of Patent Office classification, the similarities and differences in structure and function of the inventions must be considered for determining whether the reference invention is pertinent to the arts to with which the present invention dealt.

Thus, under In re Ellis, we have to still ascertain if the art is reasonably pertinent to the particular problem with which the inventor is involved.

Here, Delauze '771's disclosure has a different purpose and relates to a different problem (i.e., making dives from installations ensuring the immersion and pressurization of divers down to a certain depth beyond 50 meters, and allowing the divers to carry out a given work safely and efficiently down to at least 650 meters (page 1, lines 10-18)). The person of ordinary skill would not reasonably be expected to see the Delauze '771 for a solution to the problem (i.e., for providing protection from reactive oxygen species).

Therefore, Delauze '771 is nonanalogous art.

The rejection of claims 18, 20, 25, and 27-32 based on Delauze '771 is not proper. Withdrawal of the rejection is requested.

2. In addition or alternatively, even if Delauze '771 is analogous art, claims 18, 20, 25, and 27-32 are still patentable for the following reasons.

(1) With respect to claims 18, 20, 25, and 27-32, reconsideration of the rejection of these

claims is also respectfully requested because the applicant has presented above reasons why independent claim 8 and dependent claim 17 which is dependent upon claim 8 are patentable and claims 18, 20, 25, and 27-32 are dependent effectively upon claim 8 and/or claim 17.

(2) In addition or alternatively, with respect to claim 31, the examiner fails to establish a *prima facie* case of obviousness for the following reasons.

The Court held that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). A statement that modifications of the prior art to meet the claimed invention would have been “ ‘well within the ordinary skill of the art at the time the claimed invention was made’ ” because the references relied upon teach that **all aspects of the claimed invention were individually known in the art** is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999). If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Here, the Delauze invention has for its object processes and installations for underwater diving employing a breathing mixture containing hydrogen for operations at medium and great depth.



(See page 1, lines 4-7) The Examiner asserted that the use of nasal cannula, oral-nasal mask or helmet is old and well known in the art. The Examiner does not show any objective reason to combine this well-known art with Delauze '771. That is, there is no modification or suggestion to modify the Delauze invention.

Since there is no modification to modify the Delauze invention, the fact that references can be combined or modified or the fact that all aspects of the claimed invention were individually known in the art is not sufficient to meet the requirements of a prima facie case of obviousness. (See supra Ex parte Levengood)

Therefore, the examiner fails to establish a prima facie case of obviousness.

**Regarding the examiner's point 19**

Claims 4-5 and 11-12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Delauze as applied to claim 3 and 10 above, and further in view of Gardner et al.

**1. Delauze '771 is nonanalogous art**

As stated before, the examiner cannot rely on Delauze '771 under 35 U.S.C. §103 because it is nonanalogous art.

**2. Even if Delauze '771 is analogous art, the claims 11 and 12 are still patentable for the following reason.**

With respect to claims 11 and 12, reconsideration of the rejection of these claims is also

respectfully requested because the applicant has presented above reasons why independent claim 8 is patentable and claims 11 and 12 are dependent effectively upon claim 10 which is dependent upon claim 8.

**Regarding the examiner's point 20**

Claims 14-15 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Delauze as applied to claim 8 above, and further in view of Scherer et al. (U.S. Patent No. 5,971,934).

1. The cited references are nonanalogous art

As stated before, the examiner cannot rely on Delauze '771 under 35 U.S.C. §103 because it is nonanalogous art.

Furthermore, Scherer et al. is nonanalogous art.

The court held that two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. . . . A reference is reasonably pertinent if . . . it is one which, because of the matter with which it deals, logically would have commended itself to the inventor's attention in considering his problem. . . . If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, . . . [i]f it is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it. In In

re Clay, 23 USPQ 2d 1058, 1060–61 (Fed. Cir. 1992).

Here, the Scherer invention is for determining cardiac output for an individual from CO<sub>2</sub> gas expirograms. (col. 1, lines 10-15). On the other hand, the present invention and Delauze '771 do not relate to the cardiac output. Thus, the art is not from the same field of endeavor. Moreover, there are no similarities in structure and function between Scherer et al. and Delauze '771. (and/or the present invention). Thus, a reference is not reasonably pertinent.

Therefore, the examiner's conclusion of obviousness is based on improper hindsight reasoning.

2. In addition or alternatively, the examiner fails to establish a prima facie case of obviousness.

To establish a *prima facie* case of obviousness, for a rejection of claims under 35 U.S.C. §103, three basic criteria must be met. One of them is that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination. The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. (Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986)).

Here, the Delauze invention has for its object processes and installations for underwater diving employing a breathing mixture containing hydrogen for operations at medium and great depth. The use of the specific composition (e.g., specific partial pressure range) of ternary gaseous mixture

called hydrex makes dives from installations ensuring the immersion and pressurization of divers down to a certain depth. There is no reason to supplement the gas of Delauze '771 with acetylene gas. It should be noted that what Scherer et al. discloses about acetylene is measurement of cardiac output from single breath measurements of acetylene gas, used as a tracer gas. (A statement that modifications of the prior art to meet the claimed invention would have been " 'well within the ordinary skill of the art at the time the claimed invention was made' " because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).)

Since there is no modification to modify the Delauze invention and the examiner's conclusion of obviousness is based on improper hindsight reasoning, there is no *prima facie* case of obviousness.

#### **Regarding the examiner's point 21**

Claims 16 and 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Delauze as applied to claims 15 and 21, and further in view of Fife (U.S. Patent No. 4,206,753).

As stated before, the examiner cannot rely on Delauze '771 under 35 U.S.C. §103 because it is nonanalogous art.

Furthermore, reconsideration of the rejection of these claims is also respectfully requested

because the applicant has presented above reasons why claims 15 and 21 are patentable and claims 16 and 22 are dependent effectively upon claim 15 or 21.

Withdrawal of the rejection is respectfully requested.

**Regarding the examiner's point 22**

The Examiner made the restriction requirement final.

Applicant has amended claims 33 to 57 to be dependent upon the method claim. The method claims 21, 28, 30 as amended claims involve the steps using apparatuses. The apparatuses are claimed in claims 33 to 57 which are dependent upon those method claims.


Reconsideration of the restriction requirement is respectfully requested.

In view of the above, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. Reconsideration of the rejections and objections is requested. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

No fee is incurred by this Amendment. Should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees. Should questions remain unresolved, the Examiner is requested to telephone the Applicant's attorney.

Should a Petition for extension of time be required with the filing of this response, the Commissioner is kindly requested to treat this paragraph as such a request and is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of the incurred fee if a check of the requisite amount is not enclosed.

Respectfully submitted,

  
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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION**

Please amend the paragraph on page 6, lines 6 through 15, to read as follows:

These compounds are fuel gas compounds, to be detailed below. Fuel gases are commonly burned with oxygen to produce heat. These are used as industrial gases, and general health and safety guidelines for these gases have been established. These gases are all classified as simple asphyxiants. [United States OSHA Regulations (Standards - 29 CFR, Gases, vapors, fumes, dusts, and mists - [1926 55 Alp A] 1926.55 App A), wherein is stated, "The limiting factor is the available oxygen which shall be at least 19.5 percent and be within the requirements addressing explosion in part 1926."]. That is, the gases are not inherently toxic as long as adequate oxygen is supplied to the body, but asphyxiation will result if the gas displaces oxygen. Since these are fuel gases and burn readily, certain mixtures of the gases with oxygen will be explosive if ignited. This property of the gases will be discussed further below.

**IN THE CLAIMS**

Please cancel claims 1 through 7, 14, 23, 30, 34, 51 and 52 without prejudice or disclaimer of their subject matter, amend claims 8, 13, 15, 21, 22, 24-29, 31-33, 35-50, 53-57 and 61, to read as follows, and add new claims 62 through 70, as listed above.

1           8. (Amended) A method of providing protection from reactive oxygen species, the method

comprising the steps of:

preparing a breathable composition comprising oxygen intentionally supplemented with a fuel gas;

providing said breathable composition to an animal on land while the animal is surrounded by a gaseous environment [with a breathable composition which contains oxygen intentionally supplemented with a first fuel gas compound.]; and

within said animal, oxidizing said reactive oxygen species with said fuel gas.

13.(Amended) The method of claim 8, said [first] fuel gas [compound] being selected from hydrogen, methane, ethane, and propane [and acetylene].

15.(Amended) The method of claim 8, said breathable [gas] composition being an explosive composition.

21.(Amended) The method of claim 8, further comprising the steps of:  
filling a first chamber having an open bottom with the breathable composition, said first chamber being positioned in a second chamber, said breathable composition being lighter than an ambient air so that said breathable composition is held in said first chamber; and  
[the breathable composition being a lighter-than-air breathable composition provided to a chamber with an open bottom; and]  
positioning the animal in the first chamber with the open bottom so that the animal breathes



8 the breathable composition.

1 22.(Amended) The method of claim 21, further comprising:  
2 [said breathable composition being an explosive composition; and]  
3 explosion-proofing the environment in the first and second chambers. [chamber.]

1 24.(Amended) The method of claim 21, further comprising:  
2 scrubbing [the air] an exhaled gas of the first chamber to remove carbon dioxide.

1 25.(Amended) The method of claim 21, said breathable [gas] composition comprising at  
2 least 66% hydrogen by volume.

1 26.(Amended) The method of claim 21, said breathable [gas] composition comprising  
2 hydrogen and acetylene.

1 27.(Amended) The method of claim 21, the breathable composition in the first chamber  
2 having a density less than about 75% of the ambient air.

1 28.(Amended) The method of claim 8, the step of providing further comprising the steps of:  
2 positioning the animal in a building with a ventilation system; and  
3 supplying said [first] fuel gas into the ventilation system [of a building] to provide the

4       breathable composition inside the building.

1               29.(Amended) The method of claim 8, the step of providing [further comprising:] said  
2       breathable composition simultaneously with the step of preparing said breathable composition by  
3       supplying said fuel gas to [the] a respiratory tract of the animal so that, [to provide the breathable  
4       composition] upon inhalation of the fuel gas and ambient air, said breathable composition is  
5       provided to the animal.

1               31.(Amended) The method of claim 8, further [comprising:] comprised of supplying the  
2       breathable [gas] composition to the animal [using] via an oral-nasal mask or a helmet.

1               32.(Amended) The method of claim 29, further [comprising:] comprised of maintaining a  
2       [the rate of supplying said first fuel gas being] selected [to yield a desired] concentration of  
3       the [first] fuel gas in the [inhaled] breathable composition by regulating a rate of supply of said fuel  
4       gas to the respiratory tract.

1               33. (Amended) A method of [An apparatus for] protecting a person from reactive oxygen  
2       species, the method comprising the steps of:  
3       preparing a fuel gas;  
4       providing an animal on land while the animal is surrounded by a gaseous environment with  
5       a nasal delivery system; and

6        supplying said fuel gas to the animal through said nasal delivery system, so that, upon  
7        inhalation of said fuel gas and ambient air, said fuel gas is provided to the animal with said ambient  
8        air, said nasal delivery system further comprising a supply of a fuel gas, [;] a supply line connected  
9        to said supply of [a] the fuel gas, [;] a flow restrictor mounted in said supply line, [for] said flow  
10       restrictor restricting [the] a flow of the fuel gas [;], and a valve mounted in said supply line, [for] said  
11       valve shutting off the flow of the fuel gas, [;] and a nasal delivery for delivering the fuel gas mixed  
12       with ambient air to a person.]

1        35. (Amended) The [apparatus] method of claim 33, with said nasal delivery system being  
2        a face mask.

1        36. (Amended) The [apparatus] method of claim 33, with said fuel gas being hydrogen.

1        37. (Amended) The [apparatus] method of claim 33, with said fuel gas being acetylene.

1        38. (Amended) The method of claim 28, [An apparatus for providing protection from  
2        reactive oxygen species,] said building comprising:

3        [a building;]

4        a ducting in the building for providing air to [rooms] an inside of the building;

5        an explosion-proof blower connected to the ducting and having a return inlet from [a room]  
6        the inside of the building;

7 a constant pressure source of said fuel gas [a gas comprising a compound selected from  
8 hydrogen, methane, ethane, propane and acetylene];  
9 a flow restrictor for restricting the flow of said fuel gas; and  
10 a flow diffuser installed in the ducting downstream of the explosion-proof blower.

1 39.(Amended) The method of claim 38, [apparatus of claim 38,] further [comprising:]  
2 comprised of opening a valve installed between said pressure source [of gas] and said flow diffuser[,  
3 for opening] when said explosion-proof blower is operating.

1 40.(Amended) The method of claim 38, said [apparatus of claim 38,] further [comprising:]  
2 comprised of:  
3 installing a flow sensor in said ducting; and  
4 opening a valve installed between said pressure source [of gas] and said flow diffuser[, for  
5 opening] when said flow sensor detects air flow in the ducting.

1 41. (Amended) The method of claim 38, said [apparatus of claim 38,] further  
2 [comprising:] comprised of:  
3 positioning a fuel-gas sensor [in the interior] inside [of] the building; and  
4 opening a valve installed between said pressure source [of gas] and said flow diffuser[, for  
5 opening] when said fuel-gas sensor detects a particular level of said fuel gas [in the interior] inside  
6 [of] the building.

1           42.(Amended) The method of claim 38, [apparatus of claim 38,] further comprised of said  
2 flow restrictor allowing a flow rate of said fuel gas [which achieves] achieving a level of said fuel  
3 gas [in the interior] inside [of] the house which is approximately 75% of [the] an explosive limit.

1           43.(Amended) The method of claim 22, [An apparatus for providing protection from reactive  
2 oxygen species, comprising:

3           a container for enclosing a person, said container having an opening at the bottom of  
4 sufficient size to allow the person to enter or exit; and

5           a breathable gas composition filling said container, said breathable gas composition  
6 comprising oxygen and a fuel gas compound;] further comprised of said breathable [gas]  
7 composition [further characterized in] being an explosive composition [and being substantially  
8 lighter than air, for remaining in the container by buoyancy].

1           44.(Amended) The method [apparatus] of claim 43, with said breathable [gas] composition  
2 consisting essentially of hydrogen, acetylene and oxygen.

1           45.(Amended) The method [apparatus] of claim 43, with said breathable [gas] composition  
2 consisting essentially of hydrogen and oxygen.

1           46.(Amended) The method [apparatus] of claim 43, with said breathable [gas] composition

2 having a density less than 75% that of air.

1 47.(Amended) The method [apparatus] of claim 43, with said first chamber further  
2 comprising[:] a flexible skirt suspended from [the] a lip defined by the open bottom [opening] of the  
3 first chamber [container].

1 48.(Amended) The method [apparatus] of claim 43, [further comprising:] wherein said first  
2 chamber is further comprised of an overflow pipe [inside the container] extending from an entry  
3 opening above the open bottom [opening] of the first chamber [container] through the top of the  
4 [container] first chamber.[:] and said second chamber is further comprised of a [non-return flap]  
5 check valve at the top of the overflow pipe, said [non-return flap] check valve is [being] located in  
6 a region providing ventilation.

1 49.(Amended) The method [apparatus] of claim 48, further comprising:  
2 positioning an inlet muffler inside the [container] first chamber [at] below the approximate  
3 height of [the] a mouth of [an occupant] the animal [of] in the first chamber [container];  
4 purifying the breathable composition drawn by the inlet muffler by locating a life support  
5 system [located] outside the [container] first chamber and [connected] connecting the life support  
6 system to said inlet muffler[, for purifying breathable gas drawn by the inlet muffler]; and  
7 purifying breathable composition to supplied to the first chamber by installing a muffler  
8 diffuser pipe inside the [container] first chamber and [connected] connecting the pipe to the life

9 support system[, for returning purified breathable gas to the container].

1 50.(Amended) The method [apparatus] of claim 49, said life support system further  
2 comprising:

3 a CO<sub>2</sub> scrubber;

4 a temperature and humidity control;

5 an oxygen supply[, for] supplementing oxygen;

6 a secondary loop [for] scrubbing nitrogen, argon, oils and other contaminants; and

7 an alarm system [for] alerting when there is a failure in the system.

1 53.(Amended) The method [apparatus] of claim 43, further comprising:

2 an antistatic mat on [the] a floor under the [container] first chamber.

1 54.(Amended) The method of claim 30, [An apparatus for providing protection from  
2 reactive oxygen species,] said delivering means comprising:

3 an electrolytic cell for electrolyzing water to hydrogen and oxygen, said breathable  
4 composition consisting essentially of said hydrogen and said oxygen produced by said electrolytic  
5 cell;

6 a supply buffer tank connected to the electrolytic cell for containing [a hydrogen/oxygen  
7 mixture] said breathable composition produced by the electrolytic cell;

8 a dome-loaded regulator connected to the supply buffer tank[, for supplying the

9 [hydrogen/oxygen mixture];

10 a hose connected to [the output of] the dome-loaded regulator; and

11 a helmet connected to the hose[,] for supplying the [hydrogen/oxygen mixture] breathable

12 composition to [the] a head of [a person] the animal.

1 55.(Amended) The method [apparatus] of claim 54, said delivering means further  
2 comprising:

3 a return hose connected to the helmet, for allowing said breathable composition [gas] to leave  
4 the helmet;

5 a dome-loaded back-pressure regulator connected to the return hose, said dome-loaded back-  
6 pressure regulator [for] controlling the pressure in the helmet to a negative pressure;

7 a return buffer tank connected to said dome-loaded back pressure regulator[,] for smoothing  
8 [the] a flow of said breathable composition [gas] through the helmet; and

9 an explosion-proof suction compressor[,] for providing negative pressure to the helmet.

1 56.(Amended) The method [apparatus] of claim 55, said delivering means further  
2 comprising:

3 a first sensing line extending from said helmet to said dome-loaded regulator; and

4 a second sensing line extending from said helmet to said dome-loaded back-pressure  
5 regulator.



1           57.(Amended) The method [apparatus] of claim 56, said delivering means further  
2    comprising:  
3           said suction compressor being designed to produce a negative pressure of approximately 3  
4    PSI.

1           61.(Amended) The method of claim 8, further comprising the step of providing the  
2    breathable composition [being provided] under a hyperbaric [conditions] condition.